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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,455	06/22/2005	Masaki Nobuhiro	511891-005	1423
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THOMPSON HINE L.L.P. Intellectual Property Group P.O. BOX 8801 DAYTON, OH 45401-8801			EXAMINER RUKIN, BEN M	
			ART UNIT	PAPER NUMBER
			2129	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,455

Applicant(s)

NOBUHIRO ET AL.

Examiner

BEN M. RIFKIN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 6/22/2004
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The instant application having Application No. 10540455 has a total of 3 claims pending in the application, all of which are ready for examination by the examiner.

I. IDS

As required by M.P.E.P 609(c), the applicant's submissions of the Information Disclosure Statement date 6/22/2004 is acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending to the extent that the examiner can due to the foreign references being in Japanese. Examiner does not read Japanese. As required by M.P.E.P 609 C(2), a copy of the PTOL-1449 initialed and dated by the examiner is attached to the instant office action.

II. REJECTIONS NOT BASED ON PRIOR ART

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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2. Claim 2 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The claim goes into long detail of at least one of the circuit diagrams depicted in Figures 2 or 3-10. However, the claim language is unclear. It refers to multiple different switches, numbering from 1-to 10, and never clearly discloses exactly which switch the applicant is referring to, and this prevents the examiner from deciding which portions of the circuit the applicant wishes to connect. The examiner has done his best to map the prior art to the applicants claims. To clear up this problem, please label the switches as they are in the chosen figure so the claim is clear and distinct.

III. REJECTIONS BASED ON PRIOR ART

Examiners Note: *Some rejections will be followed by an 'EN' that will denote an examiners note. This will be placed to further explain a rejection.*

Claim Rejections - 35 USC § 103

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 5937143 A) in view of Fukui et al (US 7019227 B2).

As per **claim 1**, Watanabe discloses, "A teaching pendant enabling device including first and second enabling signal circuits each configured to selectively output an enabling signal for enabling a teaching signal given to a mechanical apparatus in accordance with operated states of first and second deadman switches each **configured to** assume a first off-state when unoperated, an On-State when half operated, and a second off-state when completely operated, comprising: (C6, particularly L23-35; *EN: This denotes a teaching pendant that ceases operation with deadman switches when the teaching pendant is pushed past a threshold, or released*). "Wherein, after an operating member of at least one of the first and second deadman switches has been turned into the second off-state, each of the first and second monitor circuits causes the respective one of the two switching means to keep the output line in an open state until both of the first and second deadman switches each made to assume the first off-state are detected"(C6, particularly L23-35; *EN: This denotes a teaching pendant that ceases operation with deadman switches when the teaching pendant is pushed past a*

threshold, or released. It would be obvious, including the circuits described by the Fukui reference, to use these switches to detect the required state so that the system operates until either situation (pressing too hard, or releasing) comes up). However, Watanabe fails to explicitly disclose, "Two switching means configured to open/close an enabling signal output line of a respective one of the first and second enabling signal circuits; and first and second monitor circuits each configured to actuate a respective one of the two switching means in accordance with results of detection of the operated states of the first and second deadman switches."

Fukui discloses, "Two switching means configured to open/close an enabling signal output line of a respective one of the first and second enabling signal circuits; and first and second monitor circuits each configured to actuate a respective one of the two switching means in accordance with results of detection of the operated states of the first and second deadman switches" (Fig.1-4, 8-29, and Fig.35-36 along with associated paragraphs. C22, particularly L5-68, C13, and C24 particularly L1-33; EN: *This denotes various circuits associated with the teaching pendant. The two switching means are shown in figure 20, R1 and L1 respectively. The Monitoring circuit (that which*

monitors which is active, allowing things to pass through or not to pass through) is R3 and L3).

Watanabe and Fukui are analogous art because both involve teaching pendants.

At the time of invention it would have been obvious to one skilled in the art of teaching pendants to combine the work of Watanabe and Fukui in order to have the circuit make up required in order to have an emergency set up for both releasing and pushing too hard on the teaching pendant .

The motivation for doing so would be to "prevent[[ing]] an accident due to contact with the machine during work" (Fukui, C1, L15-20) by using circuits to prepare a deadman switch to protect the user.

Therefore at the time of invention it would have been obvious to one skilled in the art of teaching pendants to combine the work of Watanabe and Fukui in order to have the circuit make up required in order to have an emergency set up for both releasing and pushing too hard on the teaching pendant .

As per claim 2, Watanabe discloses, "including a first position assumed in an unoperated condition, a second position assumed in a half-operated condition, and a third position assumed in a completely operated condition" (C6, particularly

L23-35; EN: *This denotes a teaching pendant that ceases operation with deadman switches when the teaching pendant is pushed past a threshold, or released*). "... To assume an off-state at the first and third positions and an on-state at the second position" (C6, particularly L23-35; EN: *This denotes a teaching pendant that ceases operation with deadman switches when the teaching pendant is pushed past a threshold, or released*).

Fukui discloses, " Wherein the first deadman switch has: first ...normally closed contacts each **configured to** become open or closed in accordance with any one of operated positions" (Fig.1-4, 8-29, and Fig.35-36 along with associated paragraphs. C22, particularly L5-68, C13, and C24 particularly L1-33; EN: *This denotes various circuits associated with the teaching pendant. Figure 20-24 denotes 2 (R3-1, 2) closed means in relation to the first Deadman Switch (Right Hand Push Button Switch)*). "First and second main contacts each configured to assume an off-state at the first and third positions and an on-state at the second position" (Fig.1-4, 8-29, and Fig.35-36 along with associated paragraphs. C22, particularly L5-68, C13, and C24 particularly L1-33; EN: *This denotes various circuits associated with the teaching pendant. Figure 20-24 denotes 2 main switches (R1 and R2)*). "Fifth to eighth normally closed

contacts each configured to become open or closed in accordance with any one of operated positions including a first position assumed in an unoperated condition, a second position assumed in a half-operated condition, and a third position assumed in a completely operated condition;" *EN: This denotes various circuits associated with the teaching pendant. Figure 20-24 denotes 2 (L3-1, 2) closed means in relation to the first Deadman Switch (Right Hand Push Button Switch)).* "Third and fourth main contacts each configured to assume an off state at the first and third positions and an On-state at the second position" (Fig.1-4, 8-29, and Fig.35-36 along with associated paragraphs. C22, particularly L5-68, C13, and C24 particularly L1-33; *EN: This denotes various circuits associated with the teaching pendant. Figure 20-24 denotes 2 main switches (L1 and L2)).*"Wherein the two switching means are first and second relays, the first relay having first and second normally open contacts and a ninth normally closed contact; and the second relay having third and fourth normally open contacts and a tenth normally closed contact" (Fig.1-4, 8-29, and Fig.35-36 along with associated paragraphs. C22, particularly L5-68, C13, and C24 particularly L1-33; *EN: This denotes various circuits associated with the teaching pendant. Figure 20-24 denotes 2 relays (R and L) each with their associated closed contact RL1-1*

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and R11-2)). "Wherein the first enabling signal circuit includes the first normally open contact connected in series with a parallel circuit parallel connecting the first and third main contacts; and the second enabling signal circuit includes the third normally open contact connected in series with a parallel circuit parallel-connecting the second and fourth main contacts" ((Fig.1-4, 8-29, and Fig.35-36 along with associated paragraphs. C22, particularly L5-68, C13, and C24 particularly L1-33; EN: *This denotes various circuits associated with the teaching pendant. Figure 20-24 denotes 2 relays (R and L) each with their associated closed contact RL1-1 and R11-2) connected in parallel with the circuits RL1-4 and RL2-4 respectively*)). "Wherein the first monitor circuit connects the first relay in series with a parallel circuit parallel-connecting a first series circuit in which the first, fifth, and tenth normally closed contacts are connected in series and a second series circuit in which the third and seventh normally closed contacts and the second normally open contact are connected in series; and the second monitor circuit connects the second relay in series with a parallel circuit parallel-connecting a third series circuit in which the second, sixth, and ninth normally closed contacts are connected in series and a fourth series circuit in which the fourth and eighth normally closed contacts

and the fourth normally open contact are connected in series" ((Fig.1-4, 8-29, and Fig.35-36 along with associated paragraphs. C22, particularly L5-68, C13, and C24 particularly L1-33; EN: *This denotes various circuits associated with the teaching pendant. Figure 20-24 disclose the various connections disclosed above.*)). However, the applicant fails to explicitly disclose, "first to fourth" and Fifth to eight."

However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to increase the number of switches since it has been held that mere duplication of the essential working parts of a device involve only routine skill in the art. *St. Regist Paper Co. v. Bemis Co.*, 193 USPQ 8. (EN: *The applicant cites having four circuits covering this aspect of the invention, and the prior art discloses having two as cited above.*).

As per claim 3, Watanabe discloses, "A teaching pendant enabling device including plural enabling signal circuits each configured to selectively output an enabling signal for enabling a teaching signal given to a mechanical apparatus in accordance with operated states of first and second deadman switches each **configured to** assume a first off-state when unoperated, an On-State when half operated, and a second off-state when completely operated, comprising: (C6, particularly L23-35; EN: *This denotes*

a teaching pendant that ceases operation with deadman switches when the teaching pendant is pushed past a threshold, or released). "Wherein, after an operating member of at least one of the deadman switches has been turned into the second off-state, each of the three or more monitor circuits causes the respective one of the two switching means to keep the output line in an open state until all of the deadman switches each made to assume the first off-state are detected "(C6, particularly L23-35; EN: *This denotes a teaching pendant that ceases operation with deadman switches when the teaching pendant is pushed past a threshold, or released. It would be obvious, including the circuits described by the Fukui reference, to use these switches to detect the required state so that the system operates until either situation (pressing too hard, or releasing) comes up).* However, Watanabe fails to explicitly disclose, "Two switching means configured to open/close an enabling signal output line of a respective one of the first and second enabling signal circuits; and first and second monitor circuits each configured to actuate a respective one of the two switching means in accordance with results of detection of the operated states of the first and second deadman switches."

Fukui discloses, "... switching means configured to open/close an enabling signal output line of a respective one of

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the plural enabling signal circuits; and three or more monitor circuits each configured to actuate a respective one of the three or more switching means in accordance with results of detection of the operated states of the plural deadman switches" (Fig.1-4, 8-29, and Fig.35-36 along with associated paragraphs. C22, particularly L5-68, C13, and C24 particularly L1-33; EN: *This denotes various circuits associated with the teaching pendant. The two switching means are shown in figure 20, R1 and L1 respectively. The Monitoring circuit (that which monitors which is active, allowing things to pass through or not to pass through) is R3 and L3).*

Both Fukui and Watanabe fail to explicitly disclose "Plural" and "Three or more."

However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to increase the number of switches since it has been held that mere duplication of the essential working parts of a device involve only routine skill in the art. *St. Regist Paper Co. v. Bemis Co.*, 193 USPQ 8. (EN: *The applicant cites having three or more circuits covering this aspect of the invention, and the prior art discloses having two as cited above in the rejection).*

Watanabe and Fukui are analogous art because both involve teaching pendants.

At the time of invention it would have been obvious to one skilled in the art of teaching pendants to combine the work of Watanabe and Fukui in order to have the circuit make up required in order to have an emergency set up for both releasing and pushing too hard on the teaching pendant .

The motivation for doing so would be to "prevent[[ing]] an accident due to contact with the machine during work" (Fukui, C1, L15-20) by using circuits to prepare a deadman switch to protect the user.

Therefore at the time of invention it would have been obvious to one skilled in the art of teaching pendants to combine the work of Watanabe and Fukui in order to have the circuit make up required in order to have an emergency set up for both releasing and pushing too hard on the teaching pendant .

Conclusion

The examiner requests, in response to this Office action, support be shown for language added to any original claims on amendment and any new claims. That is, indicate support for newly added claim language by specifically pointing to page(s) and line no(s) in the specification and/or drawing figure(s). This will assist the examiner in prosecuting the application.

When responding to this office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections See 37 CFR 1.111(c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BEN M. RIFKIN whose telephone number is (571)272-9768. The examiner can normally be reached on Monday through Friday 9:00 AM-6:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on (571) 272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 25, 2008

Ben Rifkin
Examiner
Art unit 2129

/David R Vincent/

Supervisory Patent Examiner, Art Unit 2129